

WHAT IS CLAIMED IS:

1. A narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising:
 a main antenna probe for performing said measurement of or said irradiation with said electric field or said magnetic field, and
 an opposite-phase excited antenna probe located in proximity to said main antenna probe in order to narrow the directionality of said main antenna probe.
2. The narrow-directivity antenna probe according to Claim 1, wherein at least said two or more opposite-phase excited antenna probes are located in proximity to said main antenna probe.
3. The narrow-directivity antenna probe according to Claim 2, wherein said opposite-phase excited antenna probes are located in proximity to said main antenna probe in a symmetric arrangement.
4. The narrow-directivity antenna probe according to Claim 1, wherein a supply electric-power to said opposite-phase excited antenna probe is made smaller than a supply electric-power to said main antenna probe, or a reception electric-power of said opposite-phase excited antenna probe is attenuated and superimposed on a reception signal of said main antenna probe, or the size of said opposite-phase excited antenna probe is made smaller than that of said main

antenna probe, said opposite-phase excited antenna probe being located in order to narrow said directionality of said main antenna probe for performing said measurement of or said irradiation with said electric field or said magnetic field.

5. The narrow-directivity antenna probe according to Claim 1, wherein an electromagnetic field generated by said opposite-phase excited antenna probe has a phase difference of $\pi \pm \pi/2$ [rad] with respect to an electromagnetic field generated by said main antenna probe, said opposite-phase excited antenna probe being located in order to narrow said directionality of said main antenna probe for performing said measurement of or said irradiation with said electric field or said magnetic field.

6. A narrow-directivity antenna probe system for using said narrow-directivity antenna probes according to Claim 1 in plural number so as to isolate and observe electromagnetic fields from wave sources existing in a desired spacious region, or so as to superimpose electromagnetic fields on each other in a desired spacious region thereby to generate an electromagnetic field that is more intense than said electromagnetic field generated in the case of said single narrow-directivity antenna probe.

7. An electromagnetic-field measurement apparatus for using said narrow-directivity antenna probe according to Claim 1 so as to measure the

proximate electric-field or magnetic-field distribution in proximity to an electronic appliance or the like.

8. An electric-current distribution search-for apparatus for using said narrow-directivity antenna probe according to Claim 1 so as to measure the proximate electric-field or magnetic-field distribution in proximity to an electronic appliance or the like, and for determining said electric-current distribution by calculation from a result of said measurement.

9. An electrical-wiring diagnosis apparatus for using said narrow-directivity antenna probe according to Claim 1 so as to irradiate an electronic appliance or the like with an electric field or a magnetic field, and for detecting a signal thereby to check the electrical-wiring connection state of said electronic appliance or the like, said signal being generated at a terminal of said electronic appliance or the like by an electric voltage or an electric current induced by said electric field or said magnetic field.

10. A narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising:

a main antenna probe for performing said measurement of or said irradiation with said electric field or said magnetic field, and

a grounded-electric-potential conductive flat-plate located in proximity to said main antenna probe in order to narrow the directionality of said

main antenna probe.

11. The narrow-directivity antenna probe according to Claim 10, wherein said two or more grounded-electric-potential conductor flat-plates are located.

12. The narrow-directivity antenna probe according to Claim 11, wherein said grounded-electric-potential conductor flat-plates are located in proximity to said main antenna probe in a symmetric arrangement.

13. A narrow-directivity antenna probe system for using said narrow-directivity antenna probes according to Claim 10 in plural number so as to isolate and observe electromagnetic fields from wave sources existing in a desired spacious region, or so as to superimpose electromagnetic fields on each other in a desired spacious region thereby to generate an electromagnetic field that is more intense than said electromagnetic field generated in the case of said single narrow-directivity antenna probe.

14. An electromagnetic-field measurement apparatus for using said narrow-directivity antenna probe according to Claim 10 so as to measure the proximate electric-field or magnetic-field distribution in proximity to an electronic appliance or the like.

15. An electric-current distribution search-for apparatus for using said narrow-directivity antenna probe according to Claim 10 so as to measure the

proximate electric-field or magnetic-field distribution in proximity to an electronic appliance or the like, and for determining said electric-current distribution by calculation from a result of said measurement.

16. An electrical-wiring diagnosis apparatus for using said narrow-directivity antenna probe according to Claim 10 so as to irradiate an electronic appliance or the like with an electric field or a magnetic field, and for detecting a signal thereby to check the electrical-wiring connection state of said electronic appliance or the like, said signal being generated at a terminal of said electronic appliance or the like by an electric voltage or an electric current induced by said electric field or said magnetic field.